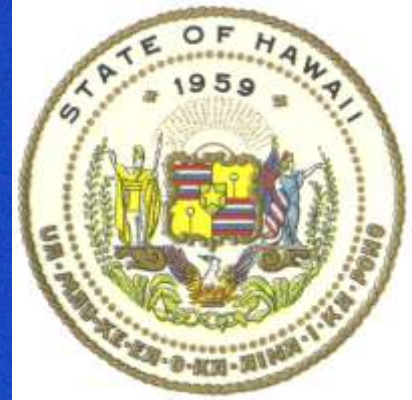


State of Hawaii Department of Land and Natural Resources

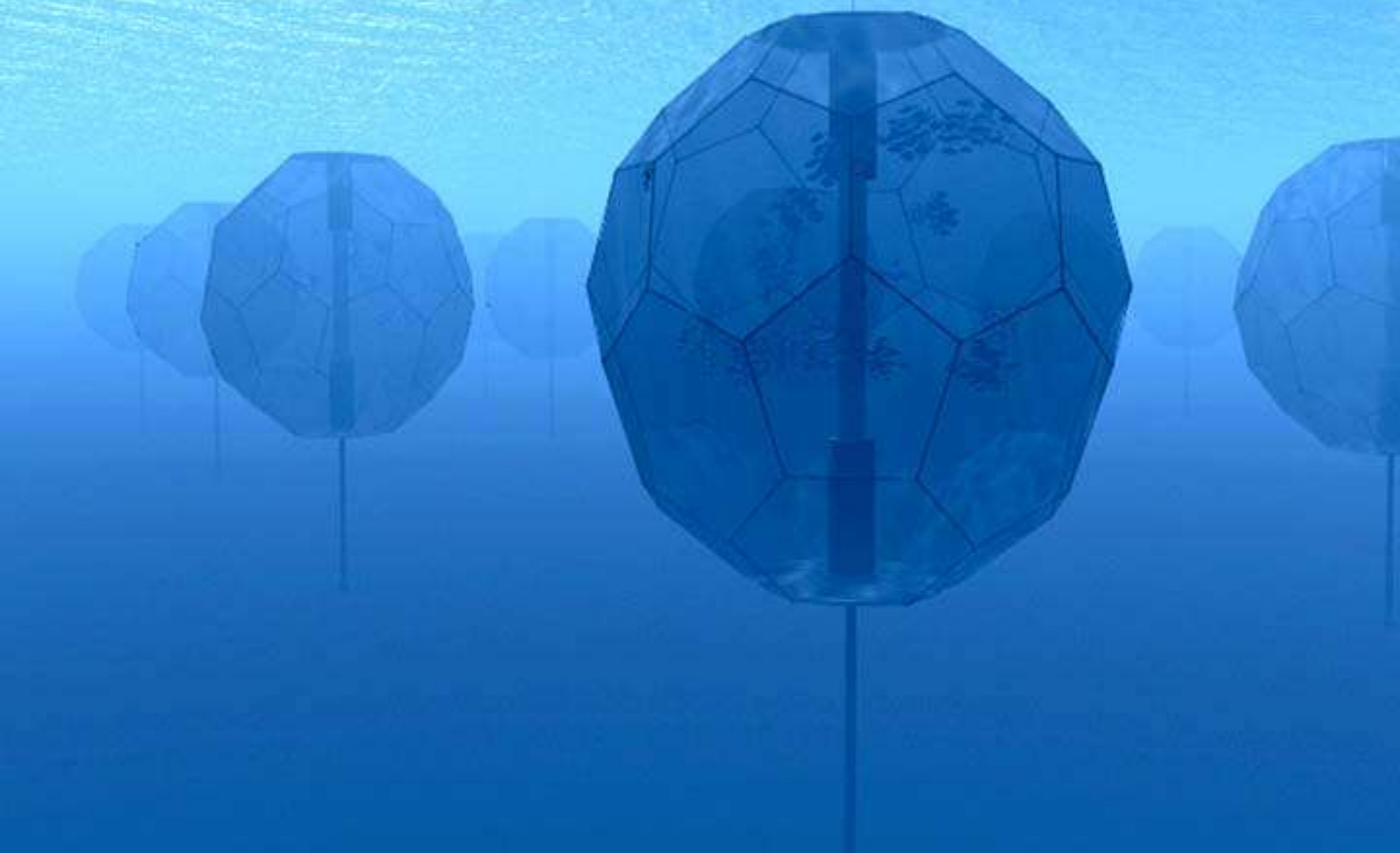
Office of Conservation and
Coastal Lands

Sam Lemmo, Administrator



Office of Conservation and Coastal Lands
Department of Land and Natural Resources
(808) 587-0377
<http://www.hawaii.gov/dlnr/occl>

DLNR Oversight of Ocean Aquaculture in the State of Hawai'i



Philosophical Considerations!

-How to feed the worlds growing population faced with dwindling wild fish populations?



“There is something fundamentally wrong with treating the earth as if it were a business in liquidation.”

Herman Daly

DLNR Management Statement

For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources, and shall *promote the development and utilization* of these resources in a manner consistent with their conservation and in furtherance of the *self-sufficiency of the State*. All public natural resources are held in trust by the State of Hawaii for the benefit of the people



DLNR Management Oversight

- DLNR is responsible for 1.3 million acres of state land, 3 million acres of state ocean waters, 2 million acres of conservation district lands, our drinking water supply, our fisheries, coral reefs, indigenous and endangered flora and fauna, and all of Hawaii's historic and cultural sites.
- Hawaii has the 4th longest shoreline of any U.S. State, and is host to the greatest number of the nation's endangered or threatened species, and most of the nation's coral reefs.
- The health of Hawaii's environment is integral and directly related to its economy and quality of life.
- With the increasing demands for public and commercial use of our natural resources, DLNR's ability to effectively carryout its management responsibilities is hampered by limited staff, limited funding, a sharp escalation in legal challenges to DLNR actions, and increasing cultural concerns.



DLNR Management Oversight

Current Funding Status:

-DLNR is a relatively small department considering budget and staffing, but has large responsibilities over all of its lands.

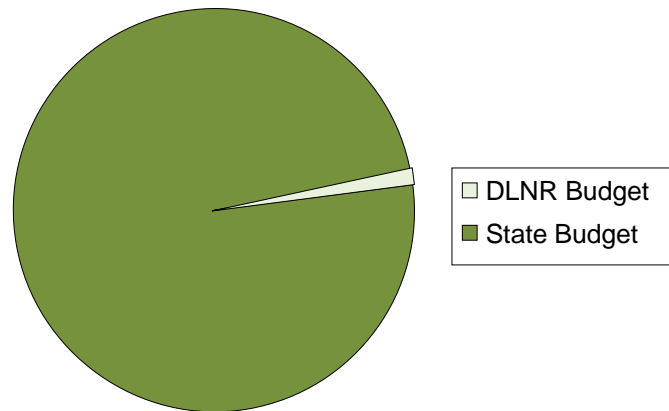
-Total operating budget minus CIP = \$98.7M

-Total number of civil service positions = 834

-Payroll total = 39M

DLNR adds up to less than 1% of the entire state operating budget and 1.6% of permanent civil service workforce.

DLNR's Share of State Budget = <1%



Existing Open Ocean Aquaculture Operations



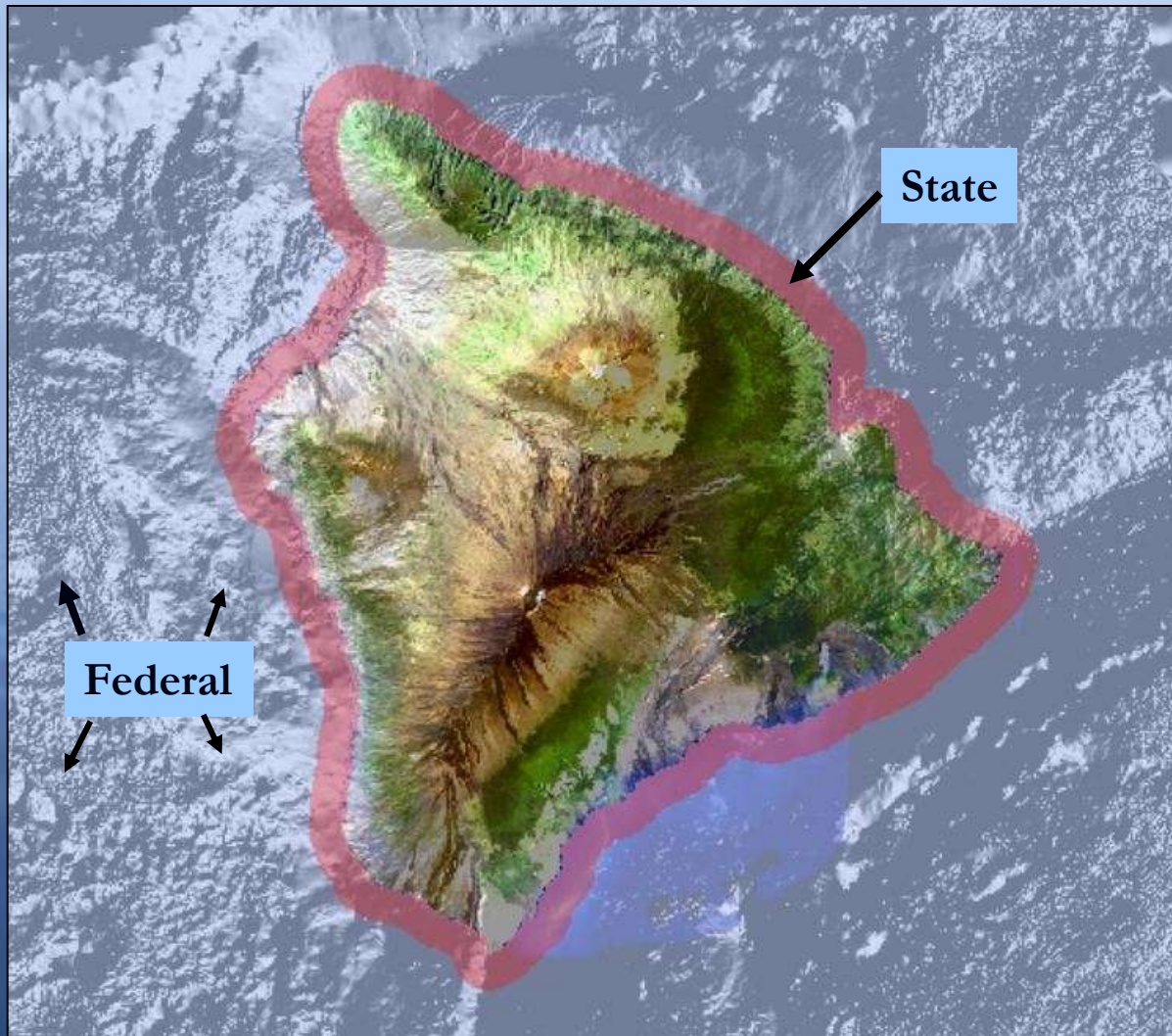
Hukilau Foods



Keahole Point



The State Department of Land and Natural Resources has regulatory authority over Ocean Aquaculture out to 3-nautical miles



The Federal government has authority over the U.S. Exclusive Economic Zone which extends from 3-nautical miles out to 200-nautical miles

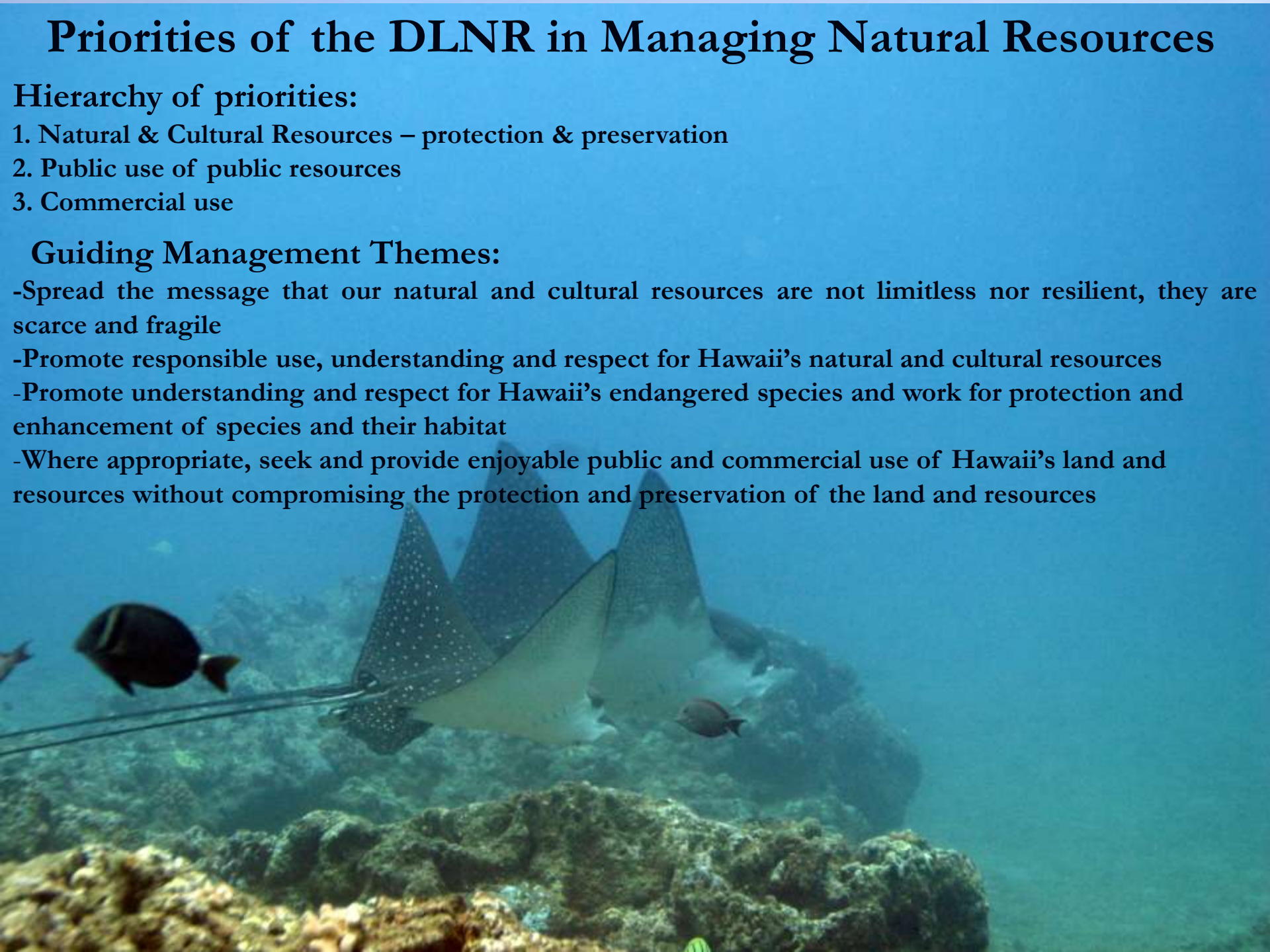
Priorities of the DLNR in Managing Natural Resources

Hierarchy of priorities:

1. Natural & Cultural Resources – protection & preservation
2. Public use of public resources
3. Commercial use

Guiding Management Themes:

- Spread the message that our natural and cultural resources are not limitless nor resilient, they are scarce and fragile
- Promote responsible use, understanding and respect for Hawaii's natural and cultural resources
- Promote understanding and respect for Hawaii's endangered species and work for protection and enhancement of species and their habitat
- Where appropriate, seek and provide enjoyable public and commercial use of Hawaii's land and resources without compromising the protection and preservation of the land and resources



Major Permits Needed for Ocean Aquaculture within State Controlled Waters

Conservation District Use Application via Chapter 190D, Hawaii Revised Statutes

State Land Disposition via Chapter 171, Hawaii Revised Statutes

National Pollution Discharge Elimination System Permit/ZOM, DOH, CWB

Coastal Zone Management Consistency Review

Section 10 Permit, Army Corps of Engineers

Conservation District Use Application



“The legislature finds that lands within the state land use conservation district contain important natural resources essential to the preservation of the state’s fragile natural ecosystems and the sustainability of the state’s water supply. It is therefore, the intent of the legislature to conserve, protect, and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.” (183C, HRS).



- Submission of CDUA with draft EA or EIS (describe content)
- Description of site and the project elements – e.g., cage type, location, etc
- Whether it will interfere with existing uses such as navigation, fishing, and public recreation
- Description of existing uses including native Hawaiian practices
- A Management Plan is also required which may describe:
 - Species to be cultivated
 - Construction and operation details
 - Monitoring and reporting schedule/plan that includes:
 - Operational or emergency reporting plan
 - Benthic monitoring and reporting plan
 - Fish health monitoring and reporting plan
 - Shark management plan
 - Marine Protected Species monitoring and reporting plan

Conservation District Use Application Steps

Within 60 days after the submission of a completed application the DLNR shall issue a public notice to invite public comment. Notice shall appear on three separate days statewide and in the County nearest the state marine waters.

Once accepted, DLNR has 180-days to review the application.

- DLNR distributes CDUA to resource agencies to solicit comments
- DLNR issues an environmental determination – e.g., anticipated FONSI, or EISPN
- DLNR schedules/holds a public hearing in the County nearest to the project
- DLNR either issues a FONSI or determines that an EIS is required
- DLNR analyzes all public and agency comments
- DLNR writes a staff report for or against the project to be presented to Land Board
 - Staff must consider comments, policies, statutory and administrative guidelines and criteria, cultural and ecological affects
- Land Board to make decision. This is an additional opportunity for public comment. Parties usually seek administrative contested case hearing at this point
- Final Land Board decision is made
- Aggrieved parties may seek relief in the Circuit Court

Conservation District Use Permit Conditions

If approved, CDUPs are issued subject to numerous conditions, such as:

- Standard indemnifications
- Final plan approval
- Standard construction initiation and completion deadlines
- Disclosure of honesty
- Restrictions on hormone use or antibiotics
- Restrictions on type of fish to be cultivated

In addition, a Management Plan must include measures to protect the environment, including but not limited to:

- Process for Submission of monitoring results (e.g., water, benthic, fish)
- Requirement for sampling of farmed fish for parasites or other disease
- Removal of facilities after conclusion of operation
- Development of a marine mammal protection plan, including:
 - A process to record all close approaches and direct physical interactions with marine protected species including collision, entanglement, grazing, with any part of the structure including cages, mooring lines, buoys, etc.
 - A protocol related to adverse impacts marine protected species that would trigger modification of project activity

Leasing Procedures

- If an applicant receives the approval of the Land Board for a CDUP, they may apply to the DLNR for a lease
- A lease may be issued pursuant to an auction or may be directly negotiated
- Revenues are to be reinvested into aquaculture industry for planning, development and research
- If the Land Board grants a lease it is subject to numerous terms and conditions, such as:
 - The term and nature of exclusive and nonexclusive uses
 - Specifying annual rent (payment of 20 percent to OHA for use of ceded land)
 - Forfeiture provisions
 - Execution of a bond
 - Demarcation of the lease area
 - Modification and/or termination provisions if threats to human health or the environment arise
 - Standard revocation provisions.

Other State and Federal Permits Needed for Hawaii Ocean Aquaculture

**State DOH, CWB National Pollution Discharge Elimination
System Permit, and Zone of Mixing**

State CZM Coastal Zone Management Consistency Review

Federal Section 10 Permit, Army Corps of Engineers

DLNR Experiences with Ocean Aquaculture

Ocean Aquaculture is constrained by several factors, including:

- Proximity to harbor facilities
- Depth and bottom type [Note: HOT is proposing untethered ocean cages]
- Ocean conditions (wind/sea/currents)
- Proximity to whale sanctuary, MLCs, military controlled areas, frequently traveled shipping lanes, high use public recreational areas, coral reefs, and hatchery facilities.

Issues that may affect the success of Ocean Aquaculture in Hawaii:

- Permitting process perceived as too onerous. Too many permits and agencies
- Ocean aquaculture has encountered difficulties in BC and Chile and Europe
- Concerns remain about disease and disease treatment methods
- Concerns remain over fish feed
- Concerns remain about infringement on native Hawaiian rights/use of ceded land
- Concerns remain about government's ability to adequately monitor/police operators

Some lessons learned so far:

- Water quality monitoring does not appear to indicate substantial problems
- Benthic monitoring has shown impacts, but very much localized
- Only native fish allowed to be reared
- No impacts to coral yet observed at the Keahole site
- Disease monitoring process needs to be improved
- Overall monitoring of operations by DLNR needs to be improved

Considerations for the Future

U.S. Commission of Ocean Policy and the Pew Ocean Commission recommend a process of ocean/coastal spatial planning

State marine waters are currently “zoned” State Land Use Conservation District. This allows entities to apply for a CDUA almost anywhere in state controlled waters

State could create Ocean Aquaculture subzones, thereby establishing areas that have been deemed to be suitable for ocean aquaculture, as well as areas that are not suitable

Benefits:

- Creates more certainty for the aquaculture industry/reduces investment risks
- Improves transparency – the public knows where it cannot occur, and where it may
- Reduces potential for environmental impacts and conflicts with other uses

Concerns:

- This approach may create concerns for industry who believe the industry, not the government, is better suited to determine where ocean aquaculture may occur

Additional Considerations for the Future

Other considerations for future management include:

- Need to improve DLNR compliance capabilities
- Direct some revenues from industry into DLNR oversight
- Continue to coordinate and improve regulatory and monitoring functions with the DOA
- Continue to support research to establish a scientific basis of the benefits and costs of ocean aquaculture in Hawaii





MAHALO